

## THE CLAIMS

What is claimed is:

1. A radiolucent aiming guide for locating a hole in a distal end of an implanted  
5 intramedullary nail, said aiming guide comprising:  
an elongated handle constructed substantially of a radiolucent material and  
having a longitudinal axis;  
said handle having a first hole for engaging a first protection sleeve, the axis  
of said first hole being perpendicular to said longitudinal axis of said handle; and  
10 a pair of radiopaque pins disposed within said handle, said pins lying on both  
sides of and parallel to the longitudinal axis of said handle, said pins lying in a plane  
perpendicular to the axis of said first hole.
2. The radiolucent aiming guide of claim 1, wherein said pins are positioned  
equidistantly from said longitudinal axis of said handle and the distance between said pair of  
15 pins is approximately equal to the width of said intramedullary nail.
3. The radiolucent aiming guide of claim 1, wherein said handle further  
comprises a second hole for engaging the proximal end of a first drill bit, the axis of said  
second hole being parallel to the axis of said first hole, and the distance between the axis of  
said first hole and the axis of said second hole being equal to the distance between the holes  
20 in the distal end in said intramedullary nail.
4. The radiolucent aiming guide of claim 3, further comprising:  
said handle having a third hole for engaging a second protection sleeve, the  
axis of said third hole being perpendicular to said longitudinal axis of said handle;  
said handle having a fourth hole for engaging the proximal end of a second  
25 drill bit, the axis of said fourth hole being parallel to the axis of said third hole, and the  
distance between the axis of said third hole and the axis of said fourth hole being equal to  
the distance between the holes in the distal end in said intramedullary nail.
5. The radiolucent aiming guide of claim 4, further comprising:  
a pair of radiopaque pins disposed within said handle, said pins lying on both  
30 sides of and parallel to the longitudinal axis of said handle, said pins being equidistant from  
said longitudinal axis of said handle and lying in a plane perpendicular to the axis of said  
first third and the axis of said fourth hole, and the distance between said pair of pins being  
approximately equal to the width of said intramedullary nail.

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6. The radiolucent aiming guide of claim 1, further comprising a protection sleeve,

said protection sleeve having a substantially cylindrical, hollow body constructed substantially of a radiolucent material and having a longitudinal axis;

5 a head at the proximal end of said body for engaging said aiming guide, said head being constructed substantially of a radiolucent material; and

a tip at the distal end of said body, said tip being constructed of a radiopaque material so that said tip will cast a substantially circular image on an X-ray monitor when an incident beam of X-rays is aligned parallel to said longitudinal axis of said body.

10 7. The radiolucent aiming guide of claim 1, further comprising a trocar,

said trocar having a substantially cylindrical body constructed substantially of a radiolucent material and having a longitudinal axis; and

a tip at the distal end of said body, said tip being constructed of a radiopaque material so that said tip will cast a substantially circular image on an X-ray monitor when an incident beam of X-rays is aligned parallel to said longitudinal axis of said body.

15 8. A protection sleeve for use with a radiolucent aiming guide, comprising:

a substantially cylindrical, hollow body constructed substantially of a radiolucent material and having a longitudinal axis;

a head at the proximal end of said body for engaging said aiming guide, said head being constructed substantially of a radiolucent material; and

20 a tip at the distal end of said body, said tip being constructed of a radiopaque material so that said tip will cast a substantially circular image on an X-ray monitor when an incident beam of X-rays is aligned parallel to said longitudinal axis of said body.

9. A trocar for use with a radiolucent aiming guide, comprising:

25 a substantially cylindrical body constructed substantially of a radiolucent material and having a longitudinal axis; and

a tip at the distal end of said body, said tip being constructed of a radiopaque material so that said tip will cast a substantially circular image on an X-ray monitor when an incident beam of X-rays is aligned parallel to said longitudinal axis of said body.

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